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CENTRAL INTELLIGENCE AGENCY
INFORMATION FROM
FOREIGN DOCUMENTS OR RADIO BROADCASTS

REPORT

CD NO.

50X1-HUM

COUNTRY USSR

SUBJECT Engineering - Electric power

HOW PUBLISHED Monthly periodical

WHERE PUBLISHED Moscow

DATE PUBLISHED Sep 1949

LANGUAGE Russian

DATE OF INFORMATION 1949

DATE DIST. 14 Dec 1949

NO. OF PAGES 2

SUPPLEMENT TO REPORT NO.

SOURCE Gidrotekhnicheskoye Stroitel'stvo, No 9, 1949.

ELECTRIFIED FLOATING PUMPING STATIONS, CONSTRUCTED ON KURA RIVER

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Along the Kura River, stationary shore pumping stations provide the water necessary for irrigating cotton plantations located in the Kura River zone of Azerbaydzhan SSR.

Due to the irregularity of the channel, these pumping stations are constantly exposed to erosive and alluvial activity of the Kura River. In view of this condition, the Ministry of Water Economy Azerbaydzhan SSR was compelled to relocate the pumping stations and erect new stations with expensive protective installaions for existing irrigated areas.

The difficulty of operating shore pumping stations was augumented by frequent pump stoppage due to the fact that during the summer period when the river level is at its lowest, the intake depth of the centrifugal pumps reaches 4-5 meters. It was necessary periodically to clean out the mud and silt which collected in the suction chambers.

The first floating pumping stations were built between 1940 and 1945 and were equipped with 60-horsepower tractor-type engines connected to centrifugal pumps (14 x 14) through reduction gears. Floating pumping stations developed later were equipped with 150-horsepower D-6 engines geared to horizontal type KG-500 pumps.

When the advantages of floating pumping stations became apparent, the decision was made to change over from internal combustion engines to electrified equipment. To accomplish this, several Diesel-electric stations were planned for the Kura River zone to provide electric power for the new stations under construction. In accordance with the plans of Azvodproiz [Azerbaydzhan Water Supply Trust?] a special construction organization, Kura-Araksvodstroy, [Kura-Arak Water Development Trust?], proceeded to effect electrification of floating pumping stations on the Kura River.

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In March 1948, a Diesel-electric station with a rated power of 1,200 kilowatts was put into operation in Syedan-Gecmushlakh Ali-Bayramlinsk Rayon, together with the first two electrified pumping stations. These stations proved satisfactory, and the difficulties which were encountered during the operation of the earlier shore pumping stations were overcome. During the 1948 irrigation season, the pumps were operated 22,926 hours and provided 30,834 cubic meters of water for irrigating up to 3,500 hectares of farmland.

The design of these stations has been firmly established and in the future they will be produced serially. Kura-Araksvodstroy has built special wharves on the shores of the Kura River to launch the stations, and to aid in their construction. Completed pontoons and entire equipment assemblies are being produced on the wharves. The pontoons measure 5.0 x 16.0 x 1.75 meters, have a welded metal frame, and are covered with 5- to 6-millimeter sheet iron. The two unit assembly installed in the pontoon includes a 16 NDN centrifugal pump, made at the factory imeni Kalinin, with an output of 375 liters per second under a pressure of 10 meters at 730 rpm, and a 60-kilowatt 220/380-volt electric motor.

The present cost of one electrified pumping station was set at about 361,000 rubles.

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